**INCLUSION OF INDIVIDUALS ACROSS THE LIFESPAN**

Individuals between ages 18 and 85 years are eligible to participate in the proposed predoctoral study. Although adults of all ages are eligible for inclusion, the data that we have thus far from the twenty-six participants that have completed the study skews representation towards young adulthood (mean age = 24.7 yrs; range = 20 – 44). Focusing my recruitment efforts towards adult participants at the predoctoral stage is important for a number of reasons. First, we are establishing a novel approach to studying uncertainty judgment formation which takes inspiration for its design from disparate literatures. While each component (i.e., using dynamic, feature rich video stimuli; applying intersubject correlation approaches; collecting continuous behavioral data) independently has demonstrated validity and utility within the field of psychology, their synthesis into a single paradigm is novel. As such, having a robust extant literature against which to compare and critique this novel approach is critical. Studies of uncertainty judgments using normative adult populations are far more common among the extant literature than are studies of uncertainty judgments in non-adult or older geriatric samples. However, establishing the validity and utility of this approach within a normative adult population will generate greater confidence when later extending this approach to other developmental populations across the lifespan. Second, my predoctoral proposal incorporates a rigorous training plan to develop expertise in novel computational techniques. These techniques are well established in adult samples, but less so in the developmental stages that bookend life. Furthermore, attempting to develop expertise in computational neuroscience techniques *and* neuroimaging of developmental populations may constitute an overly-ambitious and unrealistic training plan given the time I have remaining in my predoctoral studies. Third, the extant literature provides evidence for far greater heterogeneity in certainty judgment formation early in life than it does within adulthood. That is to say, the difference in social cognition performance between a 13 and 18 year old may be categorically different than that of a 25 and 30 year old, despite the magnitude of their age difference being equivalent. As such, sufficiently capturing this additional variability requires larger sample sizes to maintain sufficient power, which can be better justified once a paradigm has been established within the field. Lastly, one limitation of the use of video stimuli is that interpretation of the narrative can be heavily influenced by a person’s culture, developmental stage, and life experience. The use of a crime drama may be considered ethically inappropriate for very young individuals or hard to follow for very old individuals.

My postdoctoral proposal does expand the proportion of the lifespan in which I will study uncertainty phenomena by recruiting adolescents; the developmental period for which questions of social cognition might be most important due to excessive risk-taking, depression and anxiety. Our stimulus would likely be inappropriate for individuals below the age of 13 and participants below the age of 13 may have difficulty with following both the instructions and stimulus narrative. Future studies could try to adapt this paradigm with more age-appropriate stimuli for younger participants. The application of computational methods to understand mechanisms in social affective developmental neuroscience is still fairly nascent, but promising and growing rapidly. The results of the studies proposed in this grant may provide a scaffolding for future work could provide tools for other researchers interested in applying naturalistic and computational approaches towards social developmental neuroscience.

Exploratory analyses during the predoctoral stage will examine whether age moderates neural synchrony among participants or the association between neural and behavioral synchrony. However, age will be an important factor in all analyses generated in my postdoctoral phase as we not only try to assess adolescent and adult differences, but also heterogeneity within adolescence itself.

Staff in both the Social and Affective Neuroscience (SAN) and the Control & Adaptive Behavior (CAB) labs have extensive experience recruiting and conducting research with adult participants. All staff working on neuroimaging projects undergo extensive training to develop the skills necessary to ethically conduct neuroimaging research, with a strong focus towards consent, assent, and debriefing considerations and this training will continue in my postdoctoral studies. Neither proposal will pose no more than minimal risk to the participants. As is standard among adolescent studies, both child and parent will need to assent and consent, respectively, to participate in the proposed postdoctoral project. If either party does not provide such, that potential participant will not be enrolled within the study.